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10/570,822	10/16/2006	Khanh Phi Van Doan	00169.111823.	7089
5514	7590	04/14/2009	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			RUIZ, ANGELICA	
			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/570,822	DOAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	ANGELICA RUIZ	2158	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 29 January 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,2,4-30 and 35 is/are pending in the application.  
 4a) Of the above claim(s) 3 and 31-34 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,4-30 and 35 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____ .

### **DETAILED ACTION**

1. The Action is responsive to Applicant's amendment, filed on December 29, 2008.
2. Claims 1-2, 4-30, and 35 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

3. Receipt is acknowledged of a request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e) and a submission, filed on December 29, 2008. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/29/2008 has been entered.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-2, 4-30, and 35 have been considered but are moot in view of the new grounds of rejection necessitated by Applicant's amendment of the claims.
5. Applicant argues in substance that the cited references, alone or in combination, are not disclosing or suggesting the features of "(i) determining at least one context entity from a representation...and at least one context entity". The Examiner respectfully disagrees because a "directory" is a "data source" as claimed. And the Examiner agrees with the applicant that the primary art Prompt does not specifically disclose "at least

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one occurrence frequency of at least one data element" to cover the mentioned limitations a secondary art was added Willse et al which is disclosed in the present office action.

6. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). *Limitations appearing in the specification but not recited in the claim are not read into the claim.* In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541,550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. The Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

### ***Claim Objections***

7. In view of amendments to Claim 28, the Examiner withdraws the pending objection to mentioned claims.

### ***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 22-23, 26-27, and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 22, 26, and 30 recite “non-graphical” which is not recited in the specification to support the new added limitations. Claim 26 is rejected as depending on a rejected claim. The Examiner will not give weight to the added features.

#### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-2, 4-30 and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over **Prompt et al (US 2006/0020586)**, in view of **Willse et al (US 2004/0059736 A1)**.

**As per Claim 1**, Prompt discloses:

***A method of presenting data from at least one data source, said method comprising the steps of:*** (Abstract and Claim 1, "A computer-implemented method for querying relational data...") and (Par [0029], "In accordance with the present invention, several embodiments for **presenting the data records** of the virtual directory server

are disclosed. In one embodiment, the virtual directory is displayed using a browser format...") and (Figures 33A-D).

**(i)constructing a representation of said at least one data source;** (Par [0123] and (Par [0317])

**(ii) obtaining at least one occurrence frequency of at least one data element from previous views of said at least one data source;** (Par [0314])

**(iii) identifying at least one compulsory entity in said representation;** ( Par [0207])

**(iv) determining at least one context entity in said representation and in context data, wherein the determination is based on said at least one occurrence frequency;** (Abstract) and (Title)

**(v) presenting a data structure, wherein the data structure is a subset of the data from the data source, comprising a plurality of data elements, wherein each said data element corresponds to at least one of said at least one compulsory entity and said at least one context entity.** (Par [0295]).

However Prompt does not specifically disclose the "at least one occurrence frequency" and "the at least one compulsory entity and said at least one context entity" on the other hand Willse discloses the above mentioned features as follows: (Par [0067]-[0068]) and (Par [0012]) and (Par [0074]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teachings of Willse into the method of Prompt to include the context and compulsory entity based on at least one occurrence frequency. The modification would have been obvious because one of the ordinary skills

in the art would implement the representation to provide the user with an enhanced and related view of the data source.

**As per Claim 2**, the rejection of claim 1 is incorporated and further Prompt discloses:

**- wherein at least one said data source is hierarchical and said data structure is hierarchical.** (Par [0159]), "schema" being the "data structure" as claimed.

**As per Claim 4**, the rejection of claim 1 is incorporated and further Prompt discloses:

**- wherein said graphical representation comprises a schema representation of said at least one data source and at least one said previous view.**

(Par [0050]) and (Par [0054], "FIG. 23A illustrates an exemplary graphical representation of a user interface for displaying a default flat view in accordance with the present invention; and FIG. 23B illustrates an exemplary graphical representation of a user interface for displaying a default indexed view in accordance with the present invention.") and (Par [0058]).

**As per Claim 5**, the rejection of claim 1 is incorporated and further Prompt discloses:

**- wherein said context data comprises data ranked according to relevance of said context entities to said compulsory entity.**

(Par [0023], "...provided to enable customizable access to relevant views of relational computing...") and (Par [0181], "The **schema manager** 1058 can also declare implicit

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**relationships.** After the schema is captured 1802, undocumented primary keys and relationships, that are implicit in the code but not appearing in the data dictionary, can be declared.") and (Par [0192]) "primary keys" and "relationships" being the "relevance".

However Prompt does not specifically discloses "ranked" on the other hand Willse discloses the above claimed feature as follows:

(Par [0163], "...where X is the context vector for a candidate synonym term. Large values of C(X) suggest that the term is related. Candidate "synonyms" are ranked on the basis of C(X) (the higher of better). In this discrimination approach, reweighted cosine similarity measures need not...").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teachings of Willse into the method of Prompt to rank the data according to relevance. The modification would have been obvious because one of the ordinary skills in the art would implement ranking the data to provide the user with the best possible representation based on relevance.

**As per Claim 6,** the rejection of claim 5 is incorporated and further Prompt discloses:

- ***wherein said context data comprises at least one associated data.*** (Par [0191])

**As per Claim 7,** the rejection of claim 6 is incorporated and further Prompt discloses:

- ***wherein said at least one associated data comprises occurrence and joint- occurrence frequencies of entities in said representation observed in at least one said previous view.***

However Prompt does not specifically disclose the “joint-occurrence frequencies” on the other hand Willse discloses the above mentioned features as follows: (Par [0098], “be expressed as a vector of corresponding numbers to provide a measure of similarity of the two documents. Considering the criteria of whether a concept is jointly present (or not present) in both documents and whether a concept is important...”) and (Par [0067]-[0068]) and (Par [0012]) and (Par [0074]).

**As per Claim 8,** the rejection of claim 2 is incorporated and further Prompt discloses:

**- wherein a root node of said at least one hierarchical data structure is an ancestor node of said at least one compulsory entity in said representation.**

(Par [0170]-[0171])

**As per Claim 9,** the rejection of claim 2 is incorporated and further Prompt discloses:

**- wherein said at least one hierarchical data structure is assigned a score equal to the occurrence probability of a root node given the occurrence of each of said at least one compulsory entity.** (Par [0159])

**As per Claim 19,** the rejection of claim 1 is incorporated and further Prompt discloses:

**- wherein said compulsory entity represents one of:**  
**(i) a location of one or more search keywords; and** (Par [0025]) and (Par [0104]) and

(Par [0207]) and (Par 0172).

**(ii) a user-selected entity.** (Par [0168])

As per Claim 22, Prompt discloses:

**A method of construction and presentation of data for a keyword searching operation in at least one data source involving at least one search keyword, said method comprising the steps of:** (Abstract and claim 1)

**(i) constructing a non-graphical representation of said at least one data source and a plurality of previous views of said at least one data source;** (Par [0314]).

**(ii) identifying at least one compulsory entity in said non-graphical representation, wherein said compulsory entity is a node in said non-graphical representation representing a location of one or more said at least one search keyword;** (Par [0207]) and (Par 0172).

**(iii) constructing at least one data structure comprising said at least one compulsory entity and one or more context entities corresponding to at least one search keyword, wherein said context entities are obtained from said non-graphical representation using context data obtained from said plurality of previous views; and** (Par [0123]).

**(iv) presenting said at least one data structure as result of said keyword searching operation.** (Title, "System and method for providing access to databases via

directories and other hierarchical structures and interfaces") and (Fig. 9). Explaining a view definition for flat hierarchy, complex index hierarchy, and basic index hierarchy.

However Prompt does not specifically disclose the "at least one occurrence frequency" and "the at least one compulsory entity and said at least one context entity" on the other hand Willse discloses the above mentioned features as follows: (Par [0067]-[0068]) and (Par [0012]) and (Par [0074]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention was made to incorporate the teachings of Willse into the method of Prompt to include the context and compulsory entity based on at least one occurrence frequency. The modification would have been obvious because one of the ordinary skills in the art would implement the representation to provide the user with an enhanced and related view of the data source.

**As per Claim 23,** the rejection of claim 22 is incorporated and further Prompt discloses:

**- wherein at least one said data source is hierarchical and said data structure is hierarchical.**

(Title, "System and method for providing access to databases via directories and other hierarchical structures and interfaces").

**As per Claim 24,** being the computer readable storage medium corresponding to the method Claim 1 respectively and rejected under the same reason set forth in connection

with the rejection of Claim and further Prompt discloses: (Par [0083]) and (Par [0155], "...The instructions and/or data may **comprise code for performing any and/or all of the techniques described herein**. These modules 1050-1070 are coupled by bus 1020 to the processing unit 1010 for communication and cooperation to provide the functionality of the system IOb ....").

**As per Claim 25**, the rejection of Claim 24 is incorporated and further Prompt discloses: *wherein at least one said data source is hierarchical and said data structure is hierarchical.*

(Title, "System and method for providing access to databases via directories and other hierarchical structures and interfaces") and (Fig. 9). Explaining a view definition for flat hierarchy, complex index hierarchy, and basic index hierarchy.

**As per Claim 26**, being the computer readable storage medium claim corresponding to the Claim 22, the rejection of Claim 22 is incorporated and further Prompt discloses: (Par [0155], "...The instructions and/or data may comprise code for performing any and/or all of the techniques described herein. These modules 1050-1070 are coupled by bus 1020 to the processing unit 1010 for communication and cooperation to provide the functionality of the system 100b...").

**As per Claim 27**, the rejection of claim 26 is incorporated and further Prompt discloses:

**- wherein at least one said data source is hierarchical and at least one said data structure is hierarchical**

(Title, "System and method for providing access to databases via directories and other hierarchical structures and interfaces") and (Fig. 9). Explaining a view definition for flat hierarchy, complex index hierarchy, and basic index hierarchy.

**As per Claim 28**, being the apparatus claim corresponding to the method Claim1 respectively and rejected under the same reason set forth in connection with the rejection of Claim and further Prompt discloses: (Par [0099]- [0100]).

**As per Claim 29**, the rejection of claim 28 is incorporated and further Prompt discloses:

**- wherein at least one said data source is hierarchical and said at least one data structure is hierarchical.**

(Par [0083], "The present invention also relates to an apparatus for performing the operations herein. This apparatus may be specially constructed for the required purposes, or it may comprise a general-purpose computer selectively activated or reconfigured by a computer program stored in the...") and (Title, "System and method for providing access to databases via directories and other hierarchical structures and interfaces") and (Fig. 9). Explaining a view definition for hierarchy, complex index hierarchy, and basic index hierarchy.

**As per claim 30**, being the apparatus claim corresponding to the method of claim 22, respectively and rejected under the same reason set forth in connection of the rejection of Claim 22 and further Prompt discloses:

(Par [0083], "*The present invention also relates to an apparatus* for performing the operations herein. This apparatus may be specially constructed for the required purposes, or it may comprise a general-purpose computer selectively activated or reconfigured by a computer program stored in the computer...") and (Par [0080], "... Furthermore, it has also proven convenient at times, to refer to certain arrangements of steps requiring physical manipulations of physical quantities as (modules) code devices, without loss of generality...").

**As per Claim 35**, the rejection of claim 4 is incorporated and further Prompt discloses:

**- wherein said schema representation is updated as new queries are logged.**  
(Par [0014], "to enable queries and updates to be made to a directory structure, the LDAP implementation alone does not and has not conventionally provided a reliable and scaleable enterprise directory primarily because recursive inquiries are...")

#### ***Allowable Subject Matter***

12. Claims 10-18 and 20- 21, objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claims 10-18 and 20-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELICA RUIZ whose telephone number is (571)270-3158. The examiner can normally be reached on 8:00 a.m. to 4:30 p.m., ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ali can be reached on (571) 272-4105. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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